measure eight inches in length, and varying from four, four and a half, to five inches in width. From the length of time the bone was macerated in the discharges, it has its outer table exfoliated in several spots; at other points both inner and outer tables have been corroded, producing small irregular holes along the margins of the bone.

BELLEVUE HOSPITAL, Sept., 1863.

ART. XIII.—Two successful Cases of Ovariotomy performed by A. Dun-LAP, M. D., of Springfield, Ohio. Reported by J. C. Reeve, M. D., Dayton, Ohio.

Case I. Julia C. first came under my observation during the summer of 1861. She was then 19 years of age, unmarried, small stature, and delicate appearance; had never suffered any serious illness, and presented no marks of disease, except enlargement of the abdomen. Not being willing to submit to any treatment proposed, I did not see her again until Sept. 17th, when I took notes of the history of her case, and of her conditions.

Four years before she menstruated once, and once only; at intervals of about three weeks, ever since then, she has had symptoms indicating an effort at menstruation, but no discharge has appeared. About four years ago swelling of the abdomen commenced, but she cannot say upon which side it first appeared; this swelling has steadily increased up to the present time, when it interferes seriously with respiration, and calls imperatively The abdomen measures fifty-two inches in circumference; the for relief. lower ribs are widely separated by the upward pressure of the tumour, exaggerating very much the cone shape of the thorax. Fluctuation is readily perceived in every direction; percussion gives a dull sound everywhere. except in the right lumbar region, and in every position of the patient; the tumour moves from side to side as she turns, as much as possible with the parietes so distended. A vaginal examination showed the uterus to be very much drawn up, so much so as to make it impossible to reach the os uteri; no fluctuation could be felt in the vagina, upon tapping the interior of the abdomen. The appetite was good, bowels regular, and no difficulty experienced in urinating.

On the 21st of Sept., having in the meantime carefully re-examined, and succeeded in reaching the os uteri, I tapped her by the usual method, through the linea alba. Thirty pints of fluid were removed, specific gravity 1.018, dark brown in colour, and presenting innumerable shining particles of matter (cholesterine); upon the addition of nitric acid, two-thirds of its bulk became solid. The removal of this fluid allowed a mass of cysts to be felt in the left iliac region as large as a child's head. She recovered from this operation speedily, and without having presented any serious symptoms.

During the following spring she again called upon me for relief from the distension, the tumour being larger than before. The operation of ovariotomy had been previously presented to her, but was then rejected; it was now again presented, and all the probabilities and possibilities candidly stated, and compared with the inevitable result of repeated tapping. Hav-

ing been examined by Dr. A. Dunlar, of Springfield, Ohio, and her case declared a favourable one for the operation, she decided to submit to it, and

it was performed by that gentleman on the 2d of April, 1862.

An incision some four or five inches long was first made in the linea alba, between the umbilicus and pubis; through this a large cyst presented itself, which was opened, and its contents allowed to escape; the hand was then carried around the remainder of the tumour, and numerous adhesions were peeled off; towards the region of the liver, however, under the lower ribs, the adhesions were extensive and extremely firm, so much so as to necessitate the extension of the incision upwards, some six or eight inches more, and the employment of the knife for their separation, during which process another of the cysts was opened; several ligatures were required here to restrain the hemorrhage from divided vessels. The pedicle of the tumour, which was formed from the left ovary, was then transfixed with a needle, carrying a ligature made of several strands of heavy silk, not twisted together; each half was tied separately and tightly, and one side of the ligature then carried once around the whole stalk, and again tied, when the tumour was removed. After giving sufficient, and, indeed, ample time for all oozing to cease, and after careful sponging of the abdominal cavity, the incision was closed by eight or ten interrupted sutures, strips of adhesive plaster were laid across between them, and a many-tailed bandage drawn around, and secured over the whole.

The patient was placed under the influence of chloroform at the beginning of the operation, and during most of the time she was fully under its influence; towards the latter part of it, the time occupied being about forty minutes, she was in a semi-conscious state, and complained a good deal. At its close she was in a far more favourable condition than could have been expected by any one who saw her but a few minutes before, her abdomen laid entirely open, its cavity, with all the viscera, fully exposed, and the effect of such incisions heightened by the immense mass removed, and by the distension outwards and upwards of the lower ribs.

The fluid part of the tumour weighed twenty-nine pounds, the solid part and assemblage of cysts unopened, thirty-five pounds; total, sixty-four

pounds.

I append notes of her condition during a few days. 2.30 P. M., three hours after the operation, pulse 96, catheter passed, urine f 3 viij; 5 P. M. pulse 100, catheter f3vj; 9 P. M., pulse 108, catheter f3iv. April 3d, 12.45 A. M., pulse 120, catheter f3iij, urine high coloured, has slept well; gave gtt. iv of tinct. verat. viridi; 5.30 A. M., vomited soon after last visit; has slept; pulse now 108, catheter f3ivss, high coloured; gave same dose verat. vir.; vomited before I left; 9 A. M., has slept most of the time; pulse 108, catheter f 5iij; 1.30 P. M., found her sleeping; pulse 112, catheter f3iv; tinct. verat. vir., gtt. iij; 5.30 P. M., no more vomiting, complains of great pain in sides in breathing; pulse 112, catheter f 5 ivss; 9 P. M., complains much of pain; great nausea; pulse 112, catheter f3v; gave gtt. xl tinct. opii, which was vomited immediately; ordered gtt. xxv every hour. April 4th, 1 A. M., pulse 112, catheter f3iij; has taken the tinct. opii twice, and slept since last visit; 6 A. M., pulse 104, sleeping, and has slept, no pain; at 9.30 P. M. of this day it is noted that there had been no vomiting all day, pulse 104, but much complaint of pain in bowels upon taking beef essence or ice, these being the only articles allowed since the operation; ordered tr. opii gtt. xxv. On the 6th, her bed was changed, and she passed urine without the catheter, which had been used at regular intervals up to that time. On the seventh day after the operation, the bowels moved, in response to several mild injections given on account of pain, with efforts to have a passage. The wound was first dressed on the sixth day, the stitches were removed in due time, and the patient had a rapid and excellent recovery, sitting up for the first time just two weeks after the operation. I find no minute made of the time at which the ligatures came away which were applied to the vessels of the adhesions; the large ligature around the pedicle could not be removed until the 2d of June, two months after the operation, and then considerable force was required to draw it out. The patient has been well ever since the operation; she enjoys excellent health at the time of writing this, and menstruates regularly.

Case II. Mrs. P., aged 24 years, has always enjoyed good health; menstruated first at 16 years of age, after which an interval of a year elapsed without any return of the flow, which then appeared regularly. The first symptom of her present disease was pain; this began some time in the month of January, 1863, and was constantly present afterwards; its seat was the left hypogastric region. On the 22d of February, the patient was married, and very soon thereafter swelling of the abdomen came on, and increased very rapidly, so rapidly, indeed, that she can give no account of any lump or tumour appearing on either side, and her impression is that she was very nearly as large soon after the first appearance of the swelling as when operated on. The menses were absent from February until the 10th of May, and during that period there were, of course, grounds for suspicion of pregnancy; after that date, they recurred regularly about the tenth of every month.

The operation was performed by Dr. Dunlap on the 4th of August. The patient was very much emaciated, extremely pale, and not presenting a promising appearance for such an undertaking. She was placed under the influence of chloroform, and its action maintained during the operation, so that scarcely an indication of pain was manifested. The steps of the operation were similar to that of the one already given; a moderate incision first, extended afterwards, when found necessary. There was a considerable amount of adhesion immediately under the first incision, so that a cyst was then opened, firm adhesions also connected the tumour with the omentum, and very firm and quite an extensive one existed between it and the small intestine; all these were peeled off, and two vessels required ligatures. The pedicle of the tumour was secured in the same manner as before, a long interval allowed for the cessation of all oozing, and a careful sponging of the abdominal cavity; the external wound was then dressed as before.

As the patient was not under my care, I cannot give an account of her daily progress. No serious symptoms arose, however, and she suffered little, if any more, than women do generally during convalescence from ordinary labour. The ligature around the pedicle has not yet (Oct. 15th) come away. She enjoys good health, has menstruated once, and has gained flesh considerably.

Independent of any value which may attach to these cases, as instances of the successful performance of operation not everywhere recognized as legitimate, or even justifiable, they are of interest so far as they bear upon points relating to the manner of operating, in regard to which the widest

diversity of opinion prevails even among men of the greatest experience. This diversity extends to almost every step of the operation; thus, some prefer a long incision through the abdominal parietes, others as short a one as possible; some secure the pedicle externally by a needle, or sutures, or by a clamp devised for the purpose; others allow it to remain in the abdominal cavity; some take extraordinary precautions as to the temperature of the room, etc.; others none at all; some are extremely careful not to sponge out, or otherwise interfere with the peritoneum; others treat the membrane with as little consideration as the external covering of the body. Under these circumstances, the steps pursued in every case of operation, with the result, should be faithfully recorded, until sufficient numbers have been reached to enable us to decide upon the best of the different modes.

But these cases are valuable in another point of view. They are the first published reports of an operator whose experience may at least be called considerable, whose statistics will compare very favourably indeed with those of the most celebrated English authorities, and who was a pioneer in this branch of surgery. To use his own language, "when he began to operate, it was with great difficulty he could induce a respectable physician to assist or countenance him," and he was solemnly warned by some of the Nestors of the profession to abandon such hazardous operations upon the human frame!

The first operation performed by Dr. Dunlap was upon a lady of Ross Co., Ohio, in September, 1843.

He has now operated upon nineteen cases with a result of fifteen recoveries and four deaths.

The causes of death were: in one case, hemorrhage; one case peritoneal inflammation; one congestion of the brain, on the seventh day after the operation; and one debility on the tenth day.

Comparing these cases with the published statistics of the best European operators, and we have a very favourable result for the surgery of this country, which holds so prominent a position in the history of ovariotomy. Thus

			Cases.	Recoveries.	Deaths.	
Spencer Wells gives			50	33	17	
Clay	"		104	72	32	
J. B. Brown	"		19	13	6	
Tyler Smith	"	•	14	11	3 and	l 1 error in

diagnosis; cancerous disease of the omentum; no injections.